

EXPRESS MAIL LABEL NO.  
EV 755075722US

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number  
**WO 2005/078425 A1**

(51) International Patent Classification<sup>7</sup>: G01N 27/26,  
27/27, 27/447

(74) Agents: CORLESS, Peter, F. et al.; Edwards & Angell,  
LLP, P.O. Box 55874, Boston, MA 02205 (US).

(21) International Application Number:  
PCT/US2005/003368

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(22) International Filing Date: 4 February 2005 (04.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/541,860 4 February 2004 (04.02.2004) US

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): JOHN  
HOPKINS UNIVERSITY [US/US]; 100 N. Charles  
Street, 5th Floor, Baltimore, MD 21201 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): CHEN, Christo-  
pher, S. [US/US]; 806 W. Montgomery Avenue, Ardmore,  
PA 19003 (US). GRAY, Darren [US/US]; 211 St. Paul  
Street, #2, Brookline, MA 02446 (US). TAN, John  
[US/US]; 420 Central Park Place, Brentwood, CA 94513  
(US). VOLDMAN, Joel [US/US]; 32 Thorndike Street,  
#3, Somerville, MA 02144 (US).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

WO 2005/078425 A1

(54) Title: METHODS AND SYSTEMS FOR PRODUCING ARRAYS OF PARTICLES

(57) Abstract: The invention provides apparatus and methods for arraying particles on a surface using dielectrophoresis.